

GENERATING MASK PATTERNS FOR ALTERNATING PHASE-SHIFT MASK LITHOGRAPHY

Abstract

A method of generating patterns of a pair of photomasks from a data set defining a circuit layout to be provided on a substrate includes identifying critical segments of the circuit layout to be provided on the substrate. Block mask patterns are generated and then legalized based on the identified critical segments. Thereafter, phase mask patterns are generated, legalized and colored. The legalized block mask patterns and the legalized phase mask patterns that have been colored define features of a block mask and an alternating phase shift mask, respectively, for use in a dual exposure method for patterning features in a resist layer of a substrate.